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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,841	01/15/2004	Michael Wayne Graham	023004.0104N3US	8757

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EXAMINER	
WHITEMAN, BRIAN A	

ART UNIT	PAPER NUMBER
1635	

NOTIFICATION DATE	DELIVERY MODE
07/09/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Office Action Summary	Application No.	Applicant(s)	
	10/759,841	GRAHAM ET AL.	
	Examiner	Art Unit	
	Brian Whiteman	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *172-211* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *172-211* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/28/08,3/26/08,4/18/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/18/08 has been entered.

Third-party submission filed under 37 CFR 1.99

A third-party submission has been filed under 37 CFR 1.99 on 2/28/08 in the published application.

To ensure that a third-party submission does not amount to a protest or pre-grant opposition, 37 CFR 1.99 does not permit the third party to have the right to insist that the examiner consider any of the patents or publications submitted. Furthermore, if the submission or part of the submission is not in compliance with 37 CFR 1.99, that noncompliant submission or part thereof will not be entered in the application file. Therefore, unless the examiner clearly cites a patent or publication on form PTO-892, Notice of References Cited and such reference is used in a rejection or its relevance is actually discussed during prosecution, consideration by the examiner of any patent or publication submitted in a third-party submission cannot be presumed.

If the applicant wants to ensure that the information in a third-party submission is considered by the examiner, the applicant should submit the information in an IDS in

compliance with 37 CFR 1.97 and 37 CFR 1.98. An individual who has a duty to disclose under 37 CFR 1.56 should also submit any material information contained in a third-party submission to the Office in an IDS in compliance with 37 CFR 1.97 and 37 CFR 1.98 to ensure such material information is properly disclosed to the examiner.

Information Disclosure Statement

The references cited in the International Search Report dated 9/27/02, 3/16/01, and 3/19/99 and the Partial European Search Report dated 11/2/07 and 6/3/05 have been considered, and will be listed on any patent resulting from this application because they were provided on a separate list in compliance with 37 CFR 1.98(a)(1).

Election/Restrictions

Viral RNA protein and Viral DNA polymerase in claims 172, 188, and 200 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on.12/29/06.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The claimed invention is directed to a mammalian cells comprising a genetic construct comprising a first nucleotide sequence having 20-30 consecutive nucleotides identical to a region of a target gene encoding a viral RNA polymerase; a second nucleotide sequence having 20-30 consecutive nucleotides complementing the first nucleotide sequence, a stuffer fragment that linked that first and second nucleotide sequence, and a transcription terminator; a promoter operably linked to the first and second nucleotide sequences and stuffer fragment.

With respect to the term "stuffer fragment", the instant specification defines the term (see page 19, line 14 to page 20, line 14) and the term could read on a single segment of a nucleic acid separating two other nucleotide sequences.

Claims 172-211 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fire et al (US 6,506,559, cited on a PTO-1449) taken with Cowsert et al. (US 5,580,767, of record).

The 102(e) reference is a U.S. patent or U.S. patent application publication of a pending or patented application that claims the rejected invention. An affidavit or declaration is inappropriate under 37 CFR 1.131(a) when the reference is claiming the same patentable invention, see MPEP § 2306. If the reference and this application are not commonly owned, the reference can only be overcome by establishing priority of invention through interference proceedings. See MPEP Chapter 2300 for information on initiating interference proceedings. If the reference and this application are commonly owned, the reference may be disqualified as prior art by an affidavit or declaration under 37 CFR 1.130. See MPEP § 718.

Fire teaches a vector comprising a construct comprising a promoter operably linked to a nucleotide sequence comprising dsRNA comprising a sense strand and an antisense strand of the target gene (columns 4 and 9). The structural gene can comprise one or more strands of the nucleotide sequence (column 4). The dsRNA may be formed by a single self-complementary RNA strand or two complementary RNA strands (column 7). A single self-complementary strand would indicate that the two nucleotides are sequences which would read on a stuffer between the two sequences.

In addition, Fire taught self-complementary RNA strands of greater than 400 bases, e.g., 25 consecutive nucleotides were identical to a sequence of a region of a target mRNA sequence, and another 25 consecutive nucleotides were complementary to that target sequence. In such a molecule, an arbitrary number of nucleotides associated with the inherent hairpin region of the RNA strand can be arbitrarily considered to be a stuffer fragment that links 25 complementary base pair. This molecule could have stuffer regions of 10, 50, 100 nucleotide bases on the arbitrary designation of what is, and what is not, the stuffer sequence. The construct comprises a regulatory region including polyadenylation (columns 8-9). The nucleotide sequence may be at least 25 or 50 bases (column 8). The vector can be introduced into a cancerous cell, including cancer cells find in humans (column 9-10). A viral vector or lipid mediated carrier transport can be used as the vector (column 9). The cell can comprise a target gene at risk from a pathogen including HIV (two copies of positive single-stranded RNA) or can be from several different types of animals (columns 4, 8, and 10). The structural gene can be less than 2.0 kilobases (table 1 and Figure 1). However, Fire does not specifically teach targeting RNA polymerase of a viral gene.

However, at the time the invention was made, Cowsert teaches antisense for inhibiting RNA polymerase (column 3).

It would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Fire taken with Cowsert, namely to produce an isolated mammalian cell comprising a construct comprising a structural gene encoding RNA polymerase of a virus. One of ordinary skill in the art

would have been motivated to combine the teaching to improve and study the efficiency of inhibiting the virus.

In view of the teaching of Fire (columns 8-9) and Cowsert (column 3), one of ordinary skill in the art would have had a reasonable expectation of success of producing the mammalian cell comprising the dsRNA construct. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." See ***KSR v. Teleflex***, 550 U.S. ___, 127 S. Ct. 1727 (2007).

Therefore the invention as a whole would have been *prima facie* obvious to one ordinary skill in the art at the time the invention was made.

Applicant's arguments filed 4/18/08 have been fully considered but they are not persuasive.

In response to applicant's argument that Fire et al. '559 Patent does not enjoy priority to the provisional application 60/068,562 because '562 does not teach stuffer fragments and that the examiner acknowledged in a prior office action that '559 Patent does not disclose a "stuffer sequence of 10-50 nucleotides in length", the argument is not found persuasive because upon further consideration the term can read on any combination of nucleotide residues (page 29, line 16). In addition, the claimed invention reads on a genetic construct comprising two nucleotide sequences each comprising 20-30 nucleotides, not consisting of 20-30 nucleotides. Furthermore, Fire taught self-complementary RNA strands of greater than 400 bases, e.g., 25 consecutive nucleotides were identical to a sequence of a region of a target mRNA sequence, and

another 25 consecutive nucleotides were complementary to that target sequence. In such a molecule, an arbitrary number of nucleotides associated with the inherent hairpin region of the RNA strand can be arbitrarily considered to be a stuffer fragment that links 25 complementary base pair. This molecule could have stuffer regions of 10, 50, 100 nucleotide bases on the arbitrary designation of what is, and what is not, the stuffer sequence.

In response to applicant's argument that while Fire does contemplate that the length of the nucleotide may be at least 25, 50, 100, 200, or 400 nucleotides, the working examples of Fire are directed to nucleotide with much larger length of nucleotides and based on these examples one of ordinary skill in the art would conclude that Fire et al. provisional preferred at least 299 nucleotide long identical nucleotide sequences over shorter identical nucleotide sequences, the argument is not found persuasive because the claimed product is not limited to nucleotide sequences consisting of 20-30 consecutive nucleotides, the claimed invention embraces nucleotide sequences comprising 20-30 consecutive nucleotides. “A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including non-preferred embodiments.” See Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). This is the case here, the specification of Fire discloses that the length of the nucleotide maybe be at least 25.

Applicants argue that the instant claims recite the range of 20-30 consecutive nucleotides identical to a region of a target gene in a mammalian cell and this is the

optimal range in mammalian cells (Exhibit D, Paul, post-filing reference) and this optimal range could not have been predicted in the prior art (See MPEP 2144.05(II)).

Applicants' argument is not found persuasive because the citation of lines 6-8 of the abstract of Paul is directed to another reference that teaches using siRNA duplexes, not genetic constructs. The claimed product is not limited to nucleotide sequences consisting of 20-30 consecutive nucleotides. In addition, there is nothing in the specification that would lead one of ordinary skill in the art to the teaching in the post-filing reference. The specification did not disclose the observation disclosed in the post-filing reference.

Claims 172-211 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agrawal et al (WO 94/01550, cited on an IDS) in view of Kool (US 5,514,546, cited on an IDS) and Cowsert et al. (US 5,580,767, of record).

Agrawal taught self-stabilizing RNA molecules comprising a region that is complementary to a target in a eukaryotic mRNA in a human cell and a region that is self-complementary. See abstract; page 8, lines 7-11 and 22-24, paragraph bridging pages 11 and 12, and page 13, lines 25-30. The target hybridizing region is from 8 to 50 nucleotides in length (sentence bridging pages 9 and 10). The size of the self complementary region may vary, but may be so extensive as to involve every nucleotide of the oligonucleotide, i.e. it may be 8-50 nucleotides in length (see page 15, lines 3-6, 16-21, and 26-30). The resulting RNA may form a hairpin structure comprising a loop, see page 15, lines 12-16, and Fig. 1. The loop is considered to be a “stuffer” sequence.

Thus, Agrawal fairly taught a double stranded RNA comprising a target hybridizing region of 8-50 ribonucleotides, a loop, and a self-complementary region of 8-50 nucleotides. The target gene may be a viral gene. Disclosed viruses include human immunodeficiency virus, Yellow Fever virus (a single strand (+) RNA virus), and Herpes simplex virus (a double stranded DNA virus). See paragraph bridging pages 10 and 11. Absent evidence of unexpected results, it would have been obvious to one of ordinary skill in the art to vary the length of the unpaired loop sequence of the self-stabilizing RNA of Agrawal in order to optimize hybridization of the complementary section of the oligonucleotides, thereby providing increased stability against nucleolytic attack. However, Agrawal does not explicitly teach vectors encoding the antisense oligonucleotides, oligonucleotides targeting a coding region, or liposome-containing compositions.

However, at the time the invention was made, Kool taught delivery of stem-loop oligonucleotides by expression vector or by direct application of the oligonucleotides. See abstract; Fig. 1; column 3, lines 16-19 and lines 58-62; column 4, lines 6-17; and column 14, lines 39-. Kool also disclosed antisense inhibition by targeting coding regions. See column 7, lines 43-46. Kool also disclosed delivery of expression vectors by viral- or liposome-mediated transfection. See column 15, lines 36-45; column 16, lines 43-47; paragraph bridging columns 24 and 25; and column 29, lines 32 and 33.

In addition, at the time the invention was made, Cowsert teaches antisense for inhibiting RNA polymerase (column 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to deliver the oligonucleotides of Agrawal by use of the expression vector of Kool and inhibiting viral RNA polymerase taught by Cowsert. MPEP 2144.06 indicates that when it is recognized in the art that elements of an invention can be substituted, one for the other, while retaining essential function, such elements are art-recognized equivalents. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. Thus the delivery techniques of Kool, i.e. direct application of oligonucleotides, and transfection of oligonucleotide expression vectors, are considered to be exchangeable equivalents. Alternatively, the method of delivering the oligonucleotides can be viewed as a matter of design choice. Moreover, one would have been motivated to use the expression vector of Kool in order to obtain continuous synthesis and action of oligonucleotides for the amount of time that the vector was present in the cell. Generally, expression vectors can be made with selectable markers that allow their maintenance in a cell for a longer time than the expected lifetime of an oligonucleotide. Thus, one of ordinary skill in the art could reasonably expect to obtain antisense inhibition for a longer period of time with the expression vector of Kool.

It would have been similarly obvious to target coding regions of target genes, and to deliver the vectors by viral or liposomal means as suggested by Kool. See KSR v. Teleflex, Id.,

Therefore the invention as a whole would have been *prima facie* obvious to one ordinary skill in the art at the time the invention was made.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 172-211 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2, 4, 5, 6, 11, 13-15, and 19-22 of U.S. Patent No. 6,573,099. Although the conflicting claims are not identical, they are not patentably distinct from each other because both set of claims embrace an isolated genetic construct comprising at least two copies of a structural gene sequence, wherein the structural gene sequence comprise a nucleotide sequence which is identical to at least a region of said target gene, wherein at least two copies of the structural gene sequence are placed under the control of a promoter, wherein one or more copies is placed operably in the sense orientation under the control of at least one promoter.

With respect to the term stuffer and target gene, one of ordinary skill in the art would look to the specification to construe the scope of the claimed invention and locate the limitations not specifically recited in the claims of '099, but in the instant claims.

Applicant's arguments filed 4/18/08 have been fully considered but they are not persuasive.

Applicant request rejection be held in abeyance until allowable subject matter in the instant application.

Claims 172-211 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 48, 107, 110, 111, 114-136, 138, and 146-149 of copending Application No. 10/646,070. Although the conflicting claims are not identical, they are not patentably distinct from each other because both set of claims are directed to a gene construct comprising a single promoter operably linked to at least two structural genes comprising greater than 20 consecutive nucleotides that are identical to a nucleotide sequence from an animal cell, wherein one structural gene is in the sense orientation to the promoter and another structural gene is placed in an antisense orientation to the promoter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 172-211 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 56, 60, 62, 65-

101 and 107 of copending Application No. 09/646,807. Although the conflicting claims are not identical, they are not patentably distinct from each other because both set of claims are directed to a gene construct comprising a single promoter operably linked to at least two structural genes comprising greater than 20 consecutive nucleotides that are identical to a nucleotide sequence from an animal cell, wherein one structural gene is in the sense orientation to the promoter and another structural gene is placed in an antisense orientation to the promoter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 172-211 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 34 and 88-133 of copending Application No. 10/821,726. Although the conflicting claims are not identical, they are not patentably distinct from each other because both set of claims are directed to a gene construct comprising a single promoter operably linked to at least two structural genes comprising greater than 20 consecutive nucleotides that are identical to a nucleotide sequence from an animal cell, wherein one structural gene is in the sense orientation to the promoter and another structural gene is placed in an antisense orientation to the promoter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 172-211 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 44, 77-100, 102, 104-113, and 142-144 of copending Application No. 10/821,710. Although the conflicting claims are not identical, they are not patentably distinct from each other because both set of claims are directed to a gene construct comprising a single promoter operably linked to at least two structural genes comprising greater than 20 consecutive nucleotides that are identical to a nucleotide sequence from an animal cell, wherein one structural gene is in the sense orientation to the promoter and another structural gene is placed in an antisense orientation to the promoter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 172-211 are directed to an invention not patentably distinct from claims 56, 60, 62, 65-101 and 107 of commonly assigned US application 09/646,807. Specifically, for the reasons set forth under the provisional obviousness double patenting rejection.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned US applications, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was

made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Whiteman whose telephone number 571-272-0764. The examiner can normally be reached on from 6:30 to 4:00 (Eastern Standard Time). The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor James Douglas Schultz can be reached on 571-272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/Brian Whiteman/
Primary Examiner, Art Unit 1635